KODIAK MANAGEMENT AREA COMMERCIAL FOOD/BAIT HERRING FISHERY HARVEST STRATEGY 1993/94

By

Dennis Gretsch,
Dave Prokopowich,
and
Kevin Brennan

Regional Information Report¹ No 4K93-25

Alaska Department of Fish and Game
Division of Commercial Fisheries, Westward Region
211 Mission Road
Kodiak, Alaska 99615

September 1993

¹The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished division reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

TABLE OF CONTENTS

	Page
LIST OF TABLES	i
LIST OF FIGURES	i
INTRODUCTION	1
HARVEST STRATEGIES	. 1
KAMISHAK HERRING STOCKS	. 1
KODIAK FOOD/BAIT HARVEST STRATEGY	. 2
MANAGEMENT UNITS	. 3
GUIDELINE HARVEST LEVELS	3
Kodiak Spawning Stocks	. 4
Kamishak Spawning Stocks	. 4
REGULATIONS	. 4
Season Opening Times and Dates	. 4
Fishing Periods	. 4
Closed Waters	. 5
Permits Required	. 5
Interim Use Permit	
Legal Gear Restrictions	. 5
EMERGENCY ORDER ANNOUNCEMENTS	. 6
REPORTS REQUIRED BY FISHERMEN	. 6
FISHER COOPERATION	. 7

LIST OF TABLES

Tabl	<u>e</u>	<u>Page</u>
1.	Kodiak management area 1993/94 herring food/bait harvest strategy. A listing of guideline harvest levels by food/bait management units	8
	LIST OF FIGURES	
<u>Figu</u>	u <u>re</u>	Page
. 1.	Map of southcentral Alaska showing the Kodiak and Cook Inlet herring management areas, along with the location of Kamishak Bay and Shelikof Strait	11
2.	Kodiak food and bait herring management units, (FB1, FB2, FB4, FB5, FB11, and FB12) which are affected by the harvest of Kamishak Bay herring	12
3.	Kodiak food and bait management area north of the latitude of Miner's Point which would be closed if the Kamishak Bay herring biomass is below 8,000 tons	13
4.	Kodiak Area herring management units and key to enlarged maps (1-9)	14
5.	Map #1, food and bait herring management unit 2, Kodiak Management Area	15
6.	Map #2, food and bait herring management units 1 and 4, Kodiak Management Area	16
7.	Map #3, food and bait herring management units 5 and 6, Kodiak Management Area	. 17
8.	Map #4, food and bait herring management units 7, Kodiak Management Area	. 18
9.	Map #5, food and bait herring management unit 8, Kodiak Management Area	. 19
10.	Map #6, food and bait herring management units 3, 9, and 10, Kodiak Management Area	. 20
11.	Map #7, food and bait herring management unit 11, North Mainland, Kodiak Management Area	. 21
12.	Map #8, food and bait herring management unit 12, mid-Mainland, Kodiak Management Area	. 22

LIST OF FIGURES (Cont.)

		Page
13.	Map #9, food and bait herring management unit 13, South Mainland, Kodiak	
	Management Area	23

INTRODUCTION

The Kodiak Management Area (KMA) food/bait herring fishery has a long history dating back to 1912. Early harvests were primarily utilized for food and reduction products and harvests far surpassed current levels. Since, the early 1960's the harvest has been utilized primarily as bait for the crab and longline fisheries.

This fishery targets both Kodiak and Kamishak spawning stocks which are present in the KMA during the food/bait season (August 1, 1993 to February 28, 1994), Figure 1. Since the herring sac roe fisheries in the Kodiak and Cook Inlet areas are closed-to-entry fisheries, they are treated as primary fisheries. These fisheries are managed to provide for the majority of the harvest on the affected stocks to occur during the Kodiak and Kamishak sac roe fisheries. The food/bait fishery on these same stocks are subsequently treated as secondary fisheries. The associated harvest levels are directly related to the results of the sac roe fisheries of these stocks.

This harvest strategy will summarize the recent regulatory changes which affect the management of this fishery.

HARVEST STRATEGIES

During the Board of Fisheries meeting held in Anchorage in November of 1992 and in Kodiak in January of 1993, new harvest strategies were adopted which will direct the management of the KMA food/bait herring fishery.

KAMISHAK HERRING STOCKS

In the Cook Inlet Area 1993 Commercial Herring Fishing Regulations, the Kamishak Bay District Herring Management Plan (5AAC 27.465.), outlines criteria for the management of the Kamishak Bay sac roe herring fishery and Shelikof Strait food/bait fishery as follows:

5 AAC 27.465 Kamishak Bay District Herring Management Plan.

- a) The purpose of the Kamishak Bay District herring management plan is to describe the management strategies used to set the guideline harvest levels for the Kamishak Bay sac roe fishery, and for that portion of the Kamishak Bay stock allocated to the food and bait fishery conducted in the North Afognak Island, West Afognak Island, Uganik, North Mainland, and Mid-Mainland food and bait management units of the Kodiak management area, known as the Shelikof Strait food and bait fishery, as described in (5 ACC 27.535(c)), Figure 2.
- b) The management year for the Kamishak Bay herring stock is July 1 through June 30.

- c) The allocation of the allowable harvest of the Kamishak Bay herring stock is 90 percent to the Kamishak Bay sac roe fishery, and 10 percent to the Shelikof Strait food and bait fishery.
- d) The guideline harvest level for the fall Shelikof Strait food and bait fishery and the following spring Kamishak Bay sac roe fishery will be based on the projected biomass as determined by the most recent aerial surveys, age class composition, historical mortality, and recruitment trends.
- e) The maximum exploitation rate for the Kamishak Bay herring stock is 20 percent of the spawning biomass, and will be determined as follows:
 - 1) if the spawning biomass is 30,000 short tons or more, the maximum exploitation rate is 20 percent, with 18 percent allocated to the Kamishak sac roe fishery and 2 percent allocated to the Shelikof Strait food and bait fishery;
 - 2) if the spawning biomass is 20,000 short tons or more, but less than 30,000 short tons, the maximum exploitation rate is 15 percent, with 13.5 percent allocated to the Kamishak sac roe fishery and 1.5 percent allocated to the Shelikof Strait food and bait fishery;
 - 3) if the spawning biomass is 8,000 short tons or more, but less than 20,000 short tons, the allowable exploitation rate is 10 percent, with 9 percent allocated to the Kamishak sac roe fishery and 1 percent allocated to the Shelikof Strait food and bait fishery;
 - 4) if the spawning biomass is less than 8,000 short tons, the Kamishak Bay sac roe fishery and the Shelikof food and bait fishery north of the latitude of Miner's Point will be closed, Figure 3.
- f) The management strategy for the Kamishak sac roe fishery is to target the fishery on older age classes, and to limit exploitation rates on younger age class herring (age five and younger) to 10 percent or less.
- g) The allocation of Kamishak Bay herring stocks to the Shelikof Strait food and bait fishery will be based on the spawning biomass of age five and older herring and not on the biomass of juveniles. The quantity of herring stocks aged four years and younger caught in the Shelikof Strait food and bait fishery will be adjusted to approximate the biomass of a similar number of age five herring.

KODIAK FOOD/BAIT HARVEST STRATEGY

The specific management plan which guides the KMA food/bait fishery is described in the Kodiak Area 1993 Commercial Herring Fishing Regulation 5 AAC 27.535. The allocation of Kamishak Bay herring stocks which overwinter in the Shelikof Strait in the KMA food/bait fishery is described in the Kamishak Bay District Herring Management Plan (5 AAC 27.465).

The 1993/94 Kodiak Harvest Strategy combines the Kamishak food/bait guideline harvest level (GHL) with the Kodiak GHL for the West Afognak, Uganik, and Uyak food/bait management units. Kodiak herring stocks have dramatically increased over the past three years. Intermixing of Kodiak and Kamishak stocks occurs during the winter months on the west side of the Kodiak Island group. Actual inseason management is guided by the following regulation:

5 AAC 27.535. HARVEST STRATEGIES.

- a) Except as otherwise provided in this section, the department shall manage the herring food/bait fishery so that the food/bait harvest does not exceed 10 percent of the actual Kodiak herring sac roe harvest in the previous season.
- b) The department shall manage the herring food/bait fishery in waters set out in the Afognak District (5 AAC 27.505 (a)(1)-(5)), in the Uganik District (5 AAC 27.505(b)) and Uyak District (5 AAC 27.505(c)) so that the total harvest does not exceed the sum of (1) the allowable harvest of the Kamishak spawning stocks that overwinter in the Shelikof Strait as determined under the Kamishak Bay District herring management plan (5 AAC 27.465) and (2) GHL set for the food/bait fishery in these waters as provided in (c), Figure 2.
- c) The GHL for the herring food/bait fishery in waters set out in the Afognak District (5 AAC 27.505 (a)(1)-(5)), Uganik District (5 AAC 27.505(b)) and Uyak District (5 AAC 27.505(c)) shall not exceed 10 percent of the herring sac roe harvest of the previous season in these waters.
- d) When the Kamishak Bay herring spawning biomass is below 8,000 short tons the department shall close the food/bait fishery in Shelikof Strait north of the latitude of Miner's Point, Figure 3.

MANAGEMENT UNITS

To accommodate this harvest strategy, thirteen (13) food/bait management units have been established to include geographical groupings of sac roe stocks and adjacent offshore areas.

Each food/bait management unit consists of several sac roe herring fishery management units, Figures 4-13. Each food/bait management unit GHL is based upon 10% of the total sac roe herring harvest which occurred within the food/bait management unit boundaries.

GUIDELINE HARVEST LEVELS

The 1993-1994 food/bait G.H.L. for the KMA will be affected by the following management considerations:

Kodiak Spawning Stocks

For Kodiak spawning stocks, as described in 5 AAC 27.535(a) Harvest Strategies, the department shall limit the food/bait harvest to 10% of the previous spring's sac roe harvest on a stock by stock basis, (Table 1). Harvest levels on Kodiak stocks in the adjacent offshore areas will reflect the combined food/bait G.H.L. for the sac roe stocks included within that management unit. Partial closure of food/bait management units may occur.

A maximum of 489 tons properly distributed throughout the KMA will be the food/bait harvest on Kodiak spawning stocks.

Kamishak Spawning Stocks

The 1994 Kamishak spawning biomass is forecasted at 25,000 tons. As described in 5 AAC 27.535(e)(2) if the spawning biomass is 20,000 short tons or more, but less than 30,000 short tons, the maximum exploitation rate is 15 percent, with 13.5 percent allocated to the Kamishak sac roe fishery and 1.5 percent allocated to the Shelikof Strait food and bait fishery.

The GHL for the Kamishak Bay herring stocks for the Shelikof Strait Bait Fishery is 380 tons.

As discussed in 5 AAC 27.535(b) Harvest Strategies, the GHL's for the Kodiak food/bait management units (F/B 1, F/B 4, and F/B 5) will be combined with the Kamishak Bay herring allocation.

The Kamishak Bay GHL of 380 tons plus the Kodiak stock combined GHL's for food/bait units F/B 1, F/B 4, and F/B 5 of 272 tons, gives a combined GHL of 652 tons. When the 652 ton GHL is reached or approached, the following management units will be closed collectively to further food/bait herring fishing, F/B 1, F/B 2, F/B 4, F/B 5, F/B 11, and F/B 12, Figure 2. Herring harvested in food and bait management units F/B 2, F/B 11, and F/B 12 are attributed to the Kamishak Bay GHL.

REGULATIONS

Season Opening Times and Dates

From August 1, 1993 through February 28, 1994.

Fishing Periods

Open to continuous fishing from 12:01 A.M. 8/1/93 to 12:00 P.M. 2/28/94 unless superseded by emergency order closures.

Closed Waters

See CLOSED WATERS section of the 1993 Commercial Herring Fishing Regulations (page 38), 5 AAC 27.530.

Consult 1993 Commercial Salmon Fishing Regulations, (5 AAC 18.350), for a listing of closed waters for the Kodiak food/bait herring fishery for the period August 1 through October 31, pages 59-63.

Permits Reguired

<u>Interim Use Permit</u> is required before a registration permit will be issued. Interim use permits are issued from the Commercial Fisheries Entry Commission in Juneau for the following gear types:

- H01K Purse Seine
- H34K Gillnet
- H07K Trawl

Registration Permit - Kodiak ADF&G Office

- All fishers and processor/buyers are required to register with the Kodiak ADF&G office prior to fishing.

Registration Permit will be used for:

- Monitoring fleet size by gear type.
- Clarifying catch reporting procedures, closed water areas, and in-season emergency order announcement procedures.

Legal Gear Restrictions

New gear restrictions for purse seine gear were adopted by the State Board of Fisheries for the 1993/94 food/bait season. No changes were implemented for trawl or gillnet gear.

- 01 Purse Seines
 - Maximum length: (NEW regulation) 150 fathoms
 - Maximum depth: (NEW regulation) 1,625 meshes. For Area K there are <u>no</u> web size restrictions.
 - Lead length unrestricted.
- 34 Gillnets
 - Maximum length: 150 fathoms; mesh size: 2-1/8" 2-1/2".
- 07 Trawl
 - No restrictions

Consult the 1993 Commercial Herring Fishing Regulations for a complete listing of all regulations.

EMERGENCY ORDER (E.O.) ANNOUNCEMENTS

It is important for Kodiak food/bait fishers to be aware of management unit closures. This can be accomplished by 1) personal contact with the Kodiak ADF&G management staff via office visits or by calling 486-1830, 2) contacting Kodiak ADF&G management staff on SSB radio frequency 3.230 mhz, 3) contacting local herring processors, 4) calling the Kodiak ADF&G recorded message phone at 486-4559, 5) listening for an emergency order update which will be broadcasted at 8:00 A.M. and 6:00 P.M. after the marine weather on SSB radio frequency 4.125 mhz or 6) by picking up the most recent emergency order from the holder mounted outside the ADF&G office.

REPORTS REQUIRED BY FISHERMEN

<u>All</u> landings of herring for food/bait purposes must be <u>verbally</u> reported to ADF&G before the product is totally unloaded at the dock.

The following phone numbers will reach Fish and Game personnel 24 hours per day:

- ADF&G Office: Monday through Friday 8:00 A.M. to 4:30 P.M. 486-1807 or 486-1830.
- After Office Hours:

4:30 P.M. to 8:00 A.M.

- 486-6007 (Dave Prokopowich)
- 486-3031 (Dennis Gretsch)
- 486-6475 (Kevin Brennan)
- 486-4831 (Pete Probasco)

All fish tickets must be completed and sent to the Kodiak Fish and Game office within a week of the landing.

Send to: Alaska Department of Fish and Game

Division of Commercial Fisheries

ATTN: Dave Prokopowich

211 Mission Road Kodiak, Alaska 99615

FISHER COOPERATION

Department personnel will conduct confidential skipper interviews to obtain biomass estimates, average school size and herring distribution data. Additionally, fisher cooperation will be appreciated when Department personnel request herring samples. These samples will be used to determine age composition, and length and weight characteristics of the commercial harvest.

Table 1. Kodiak Management Area 1993/94 herring food/bait harvest strategy. A listing of guideline harvest levels by food/bait management units^a. (G.H.L. harvest numbers represent short tons).

Food/Bait Mgmt. Units	Sac Ro No.	oe Management Units Name	1993 S G.H.L.	ac Roe Harvest	1993/94 Food/Bait G.H.L.
F/B 1	A010	Raspberry	165	445	44
	AO20	Malina	90	312	31
West Afognak	A031	Paramanof	100	431	43
Unit	A032	Foul Bay	60	158	16
	A040	Blue Fox/Devil's Inlet		240	24
	AO50	Offshore Afognak	Exploration	0	Exploration
UNIT TOTALS:			445	1586	158
F/B 2	A060	Shuyak	20	0	0
1,5 2	A070	Perenosa	15	10	1
North Afognak	A071	Delphin	10	0	Ō
Unit	A072	Seal Bay	10	Õ	Ö
	A080	Tonki	15	ŏ	Ö
UNIT TOTALS:	· · · · · · · · · · · · · · · · · · ·	***************************************	70	10	1
	3.000	T -)	4 1		
F/B 3	A090	Izhut	15	5	1
7	A091	Kitoi	10	0	0
East Afognak	A092	McDonalds	10	0	0
Unit	A100	Danger	25	30	3
	A101	Litnik	10	1	0
	A102	Inshore Marmot	10	0	0 .
UNIT TOTALS:			80	36	4
F/B 4	UG10	Kupreanof	10	0	0
1710 4	UG20	Viekoda	80	95	9
Uganik	· UG21	Terror	90	214	21
Unit	UG30	Village Islands	135	484	48
Oille	UG31	W. Uganik Passage	75	73	7
•	UG31	N.E. Arm Uganik	110	7.3	0
	UG32	E. Arm Uganik	60	113	11
	UG3 4	S. Arm Uganik	60	92	9
	UG40	Offshore Uganik	Exploration	0	0
UNIT TOTALS:	******		620	1,074	105
F/B 5	UY10	Offshore Uyak	Exploration	0	Exploration
.,,,	UY20	Harvester	10	0	1
Uyak	UY30	Inner Uyak	135	34	3
Unit	UY32	Browns Lagoon	30	9	. 1
0111	UY31	Larsen Bay	10	16	2
	UY40	Zachar	75	3	0
	UY50	Spiridon	90	21	2
	0130	* * * * * * * * * * * * * * * * * * * *			
UNIT TOTALS:	0130		350	83	9

Table 1. (page 2 of 3)

Food/Bait Mgmt. Units	Sac Ro No.	oe Management Units Name	1993 S	ac Roe Harvest	1993/94 Food/Bait G.H.L.
F/B 6 Sturgeon/ Halibut Unit	SH01	Sturgeon/Halibut	Exploration	0	Exploration
F/B 7	AL10	Outer Alitak	Exploration	28	3
31:	AL20	Inner Alitak	75 220	71	7
Alitak Unit	AL21 AL30	Deadman Sulua	230 145	379 203	38 20
OHIC	AL40	Lower Olga/N. Upper Ol		27	3
	AL50	Upper Olga/Moser	110	50	5
	AL60	Geese/Twoheaded	Exploration	15	1
UNIT TOTALS:			590	773	77
F/B 8	GO10	Kaiugnak	20	13	1
-,	GO20	W. Sitkalidak	275	286	29
Eastside	G021	Barling	40	39	4
Unit	GO22 GO23	E. Sitkinak Tanginak	180 15	293 19	29. 2
	GO30	Outer Sitkalidak	Exploration	0	Exploration
	GO40	Outer Kiliuda	Exploration	46	5
	GO41	Inner Kiliuda	60	127	13
	GO42 GO50	Shearwater Outer Ugak	75 Exploration	91 52	9 5
	GO50	Pasagshak	30	28	3
	GO51	Inner Ugak	95	130	13
UNIT TOTALS:			790	1112	113
F/B 9	GO60	Womens Bay	110	30	3
2,23	G100	Kalsin Bay	15	Ö	0
Chiniak	G101	Middle Bay	20	16	2
Unit	G102	Inshore Chiniak	10	0	. 0
UNIT TOTALS:			155	46	5
F/B 10	GO70	Monashka/Mill Bay	Exploration	0	Exploration
	GO80	Anton Larsen	10	0	0
North Kodiak	GO81	Sheratin	10	0	0
Unit	GO90 G103	Kizhuyak Spruce Island	100 10	67 0	7 0
UNIT TOTALS:			130	67	7
F/B 11	MO10	North Mainland	Exploration	0	Exploration
1,2 11	MO20	Inner Kukak	65	15	1
No. Mainland Unit	MO30 MO40	Outer Kukak Inner/Outer Missak	Exploration Exploration	0	Exploration Exploration
UNIT TOTALS:			. 65	15	1

Table 1. (page 3 of 3)

Food/Bait Mgmt. Units	Sac Ro No.	<u>De Management Units</u> Name	1993 S G.H.L.	ac Roe Harvest	1993/94 Food/Bait G.H.L.
F/B 12 Mid-Mainland Unit	MO50 MO60 MO70 MO80 MO90	Inner Katmai Outer Katmai Alinchak Puale Bay Portage Bay	65 Exploration 40 Exploration Exploration	24 0 63 0	2 Exploration 6 Exploration Exploration
UNIT TOTALS:			105	87	8
F/B 13 So. Mainland Unit	M100 M110 M120	Outer Portage Wide Bay Lower Shelikof	125 Exploration	0 15 0	Exploration 1 Exploration
UNIT TOTALS:			125	15	1
GRAND TOTALS:			3,525	4,916	489

^a The Kodiak Area total G.H.L. for food/bait fishery, as indicated in the 1993 Herring Regulations, is managed so that the food/bait harvest does not exceed 10% of the actual herring sac-roe harvest in the previous season. This table reflects the available food/bait harvest for each sac-roe stock or food/bait unit, whichever applies. (See Harvest Strategy.) G-H-L and harvest figures are rounded to the nearest ton.

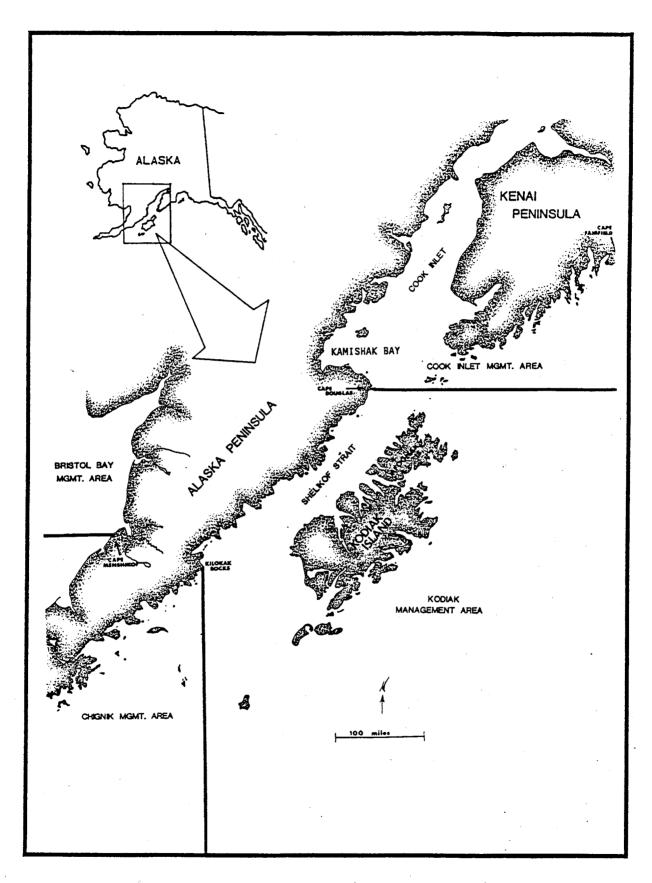


Figure 1. Map of southcentral Alaska showing the Kodiak and Cook Inlet herring management areas, along with the location of Kamishak Bay and Shelikof Strait.

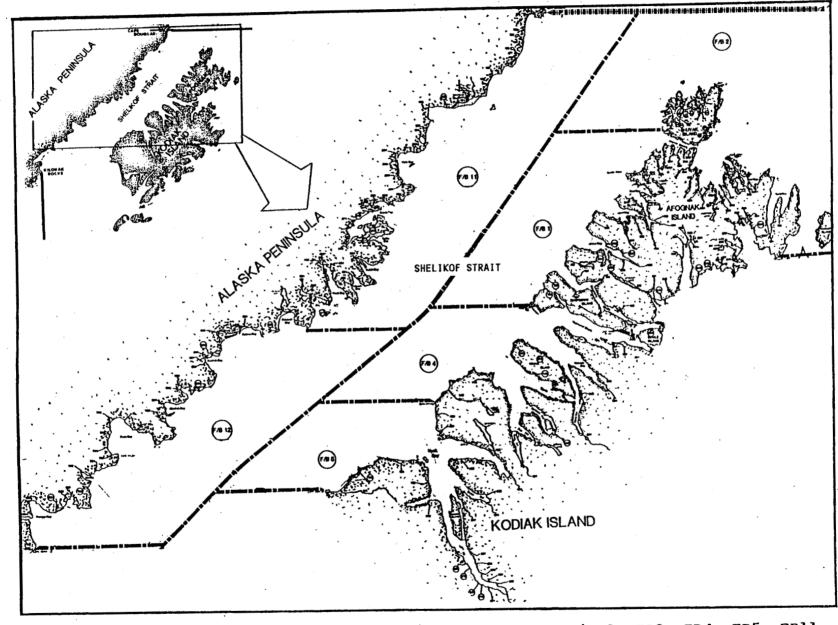


Figure 2. Kodiak food and bait herring management units, (FB1, FB2, FB4, FB5, FB11, and FB12) which are affected by the harvest of Kamishak Bay herring.

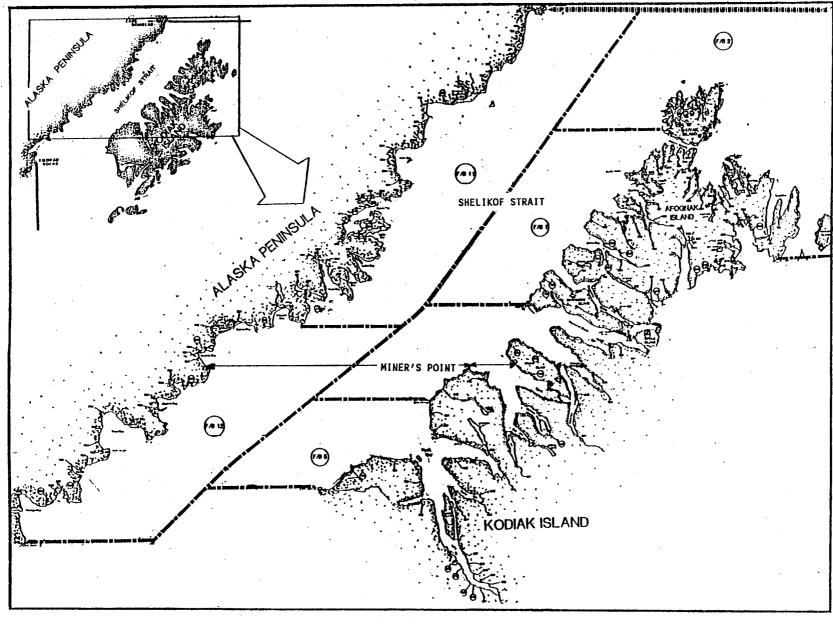


Figure 3. Kodiak food and bait management area north of the latitude of Miner's Point which would be closed if the Kamishak Bay herring biomass is below 8,000 tons.

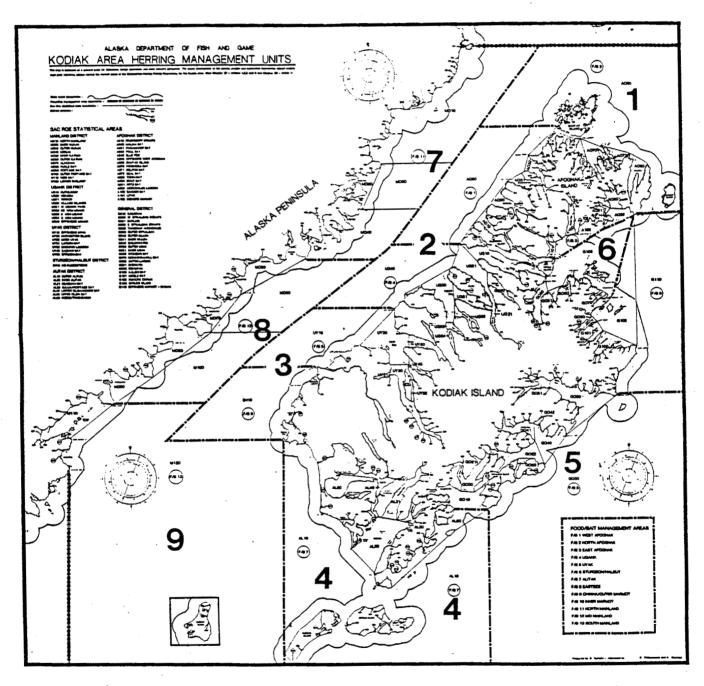


Figure 4. Kodiak Area herring management units and key to enlarged maps (1-9).

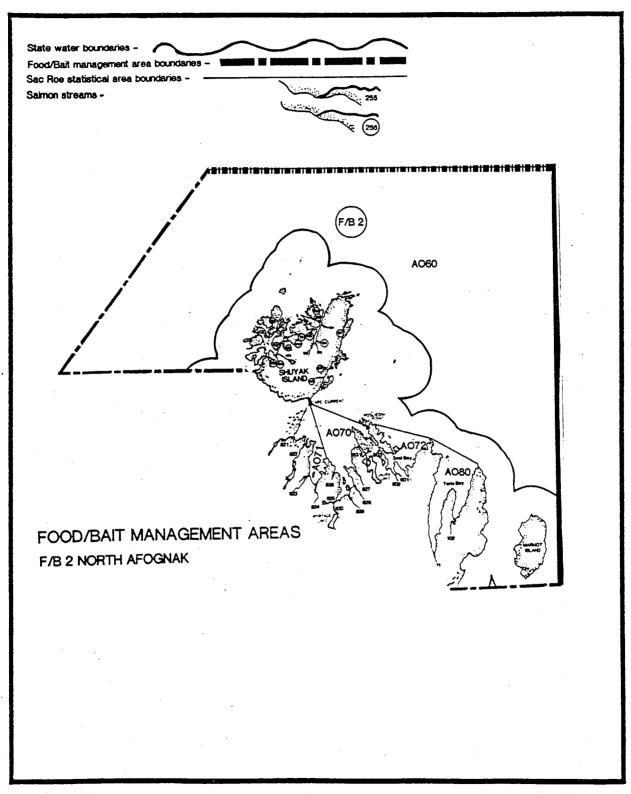


Figure 5. Map #1, food and bait herring management unit 2, Kodiak Management Area.

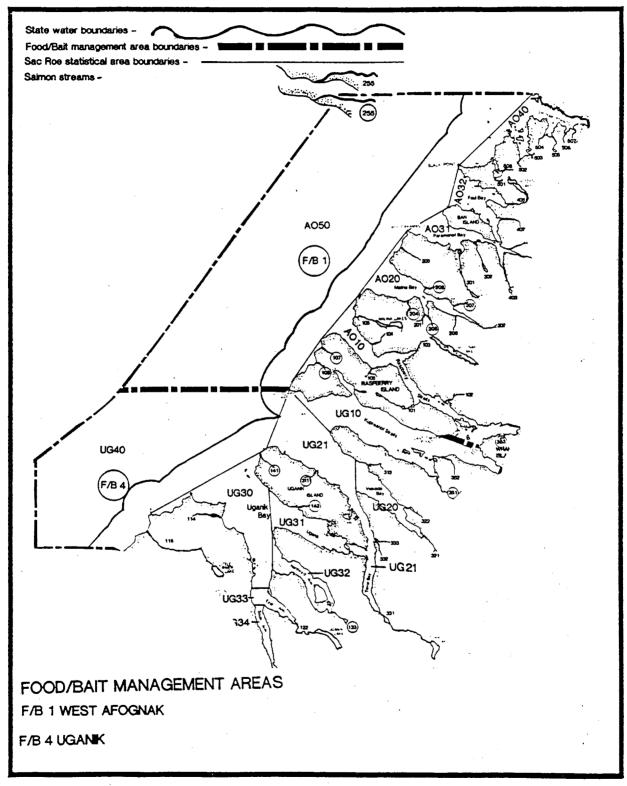


Figure 6. Map #2, food and bait herring management units 1 and 4, Kodiak Management Area.

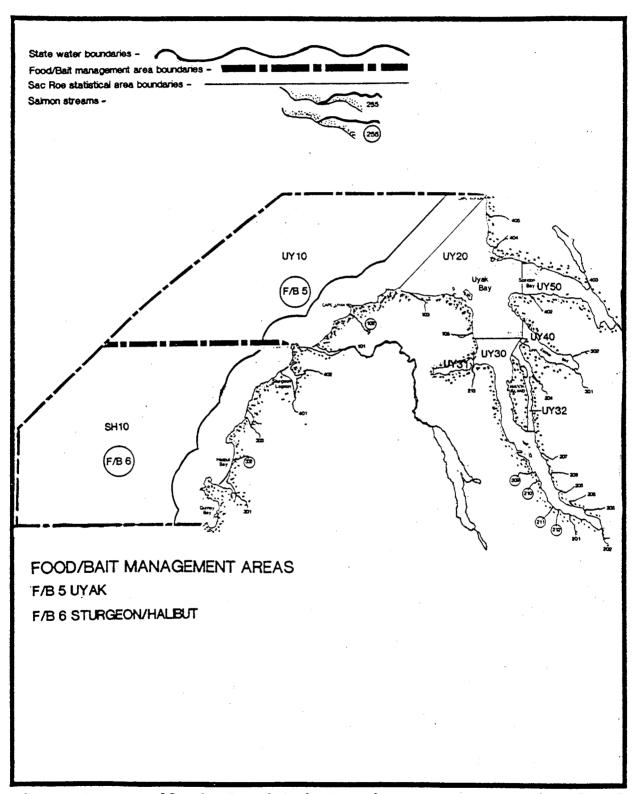


Figure 7. Map #3, food and bait herring management units 5 and 6, Kodiak Management Area.

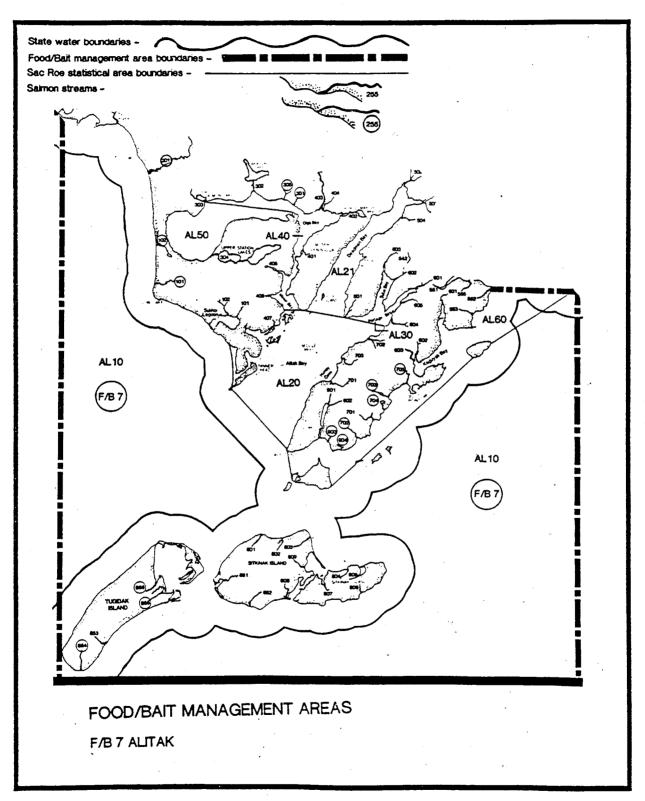


Figure 8. Map #4, food and bait herring management unit 7, Kodiak Management Area.

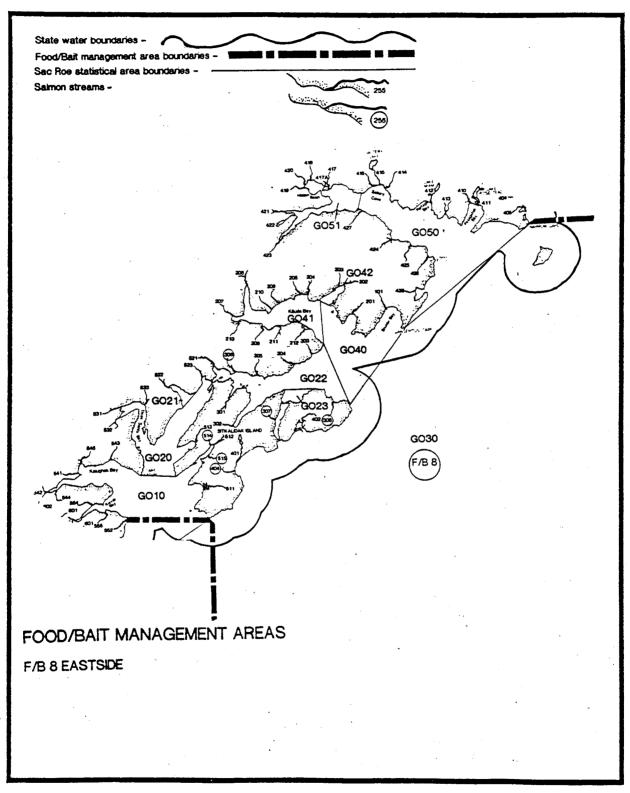


Figure 9. Map #5, food and bait herring management unit 8, Kodiak Management Area.

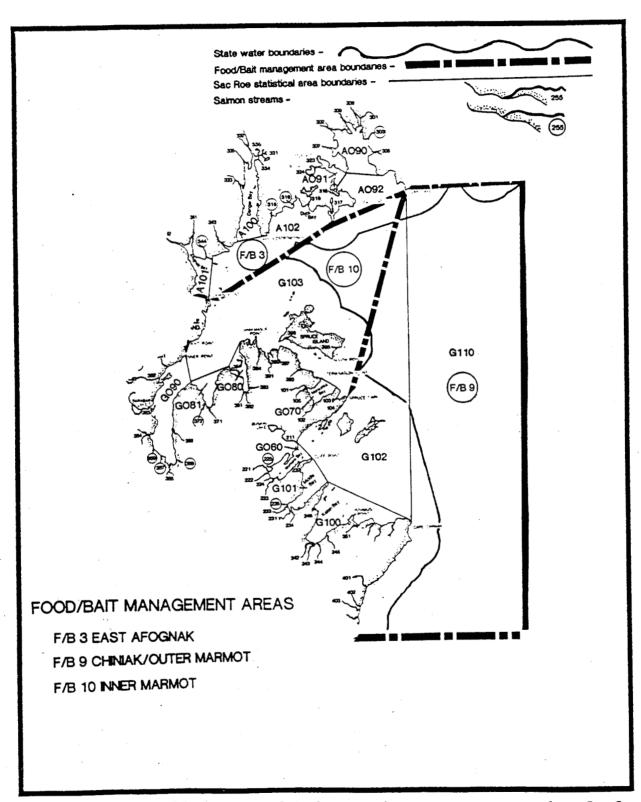


Figure 10. Map #6, food and bait herring management units 3, 9, and 10, Kodiak Management Area.

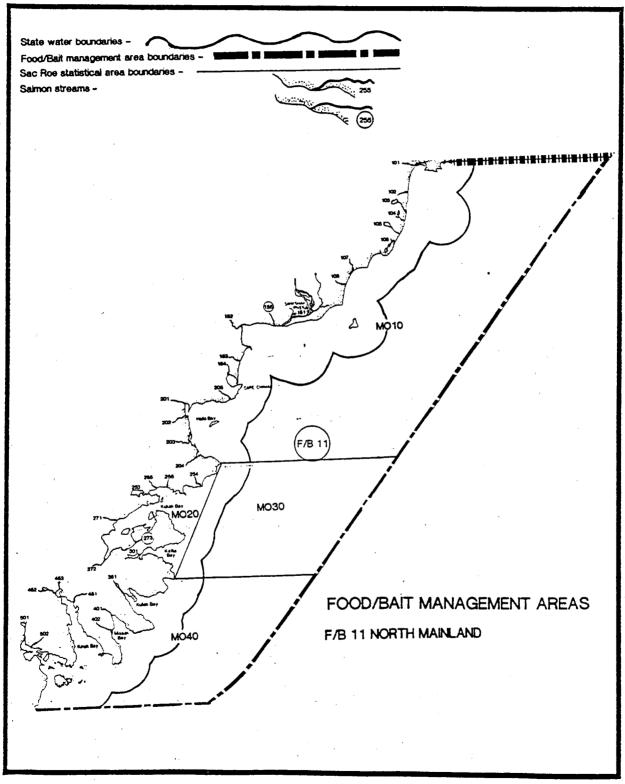


Figure 11. Map #7, food and bait herring management unit 11, North Mainland, Kodiak Management Area.

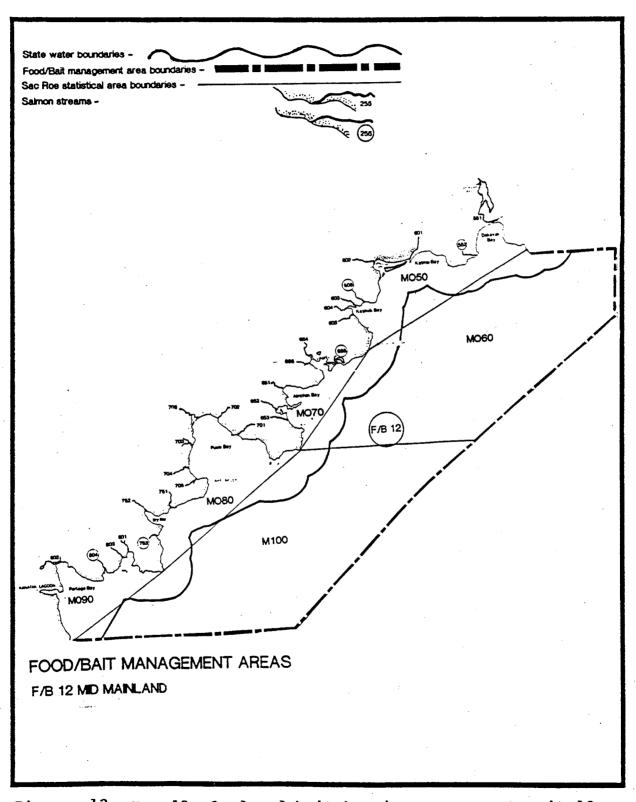


Figure 12. Map #8, food and bait herring management unit 12, mid-Mainland, Kodiak Management Area.

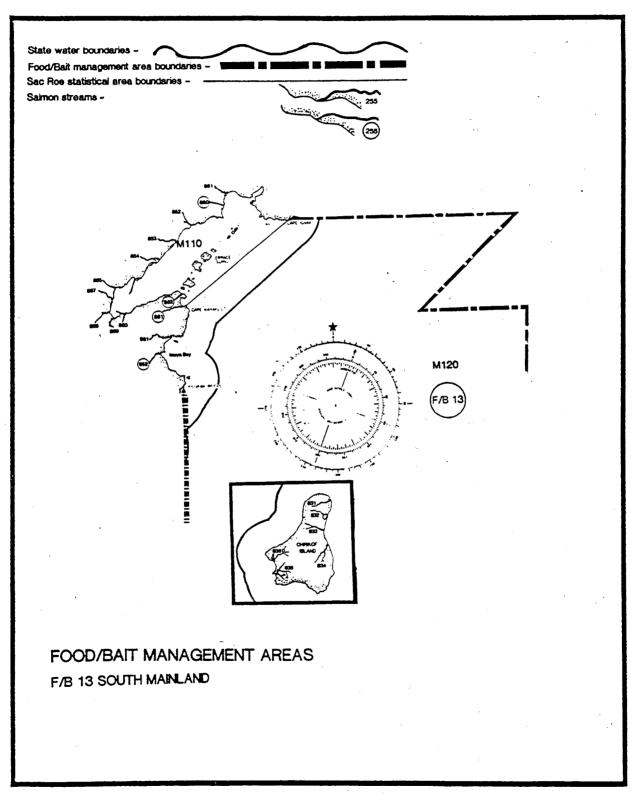


Figure 13. Map #9, food and bait herring management unit 13, South Mainland, Kodiak Management Area.

The Alaska Department of Fish and Game administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington, VA 22203 or O.E.O., U.S. Department of the Interior, Washington DC 20240.

For information on alternative formats for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-6077, (TDD) 907-465-3646, or (FAX) 907-465-6078.